

Storm Analysis

As of 09/06/2017 18:00 AST, water levels at locations on Puerto Rico are risining and range between 0.4 and 1.2 feet above normal tide levels. Water levels in the U.S. Virgin Islands are slowly falling and range between 0.3 and 1.0 feet above normal tide levels.

Wind speeds across the region range between 20-40 knots with gusts up to 60 knots. Barometric pressure continues to fall at locations ahead of the storm and is rising elsewhere.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Analyst:CMF

SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

Hurricane Irma Advisory Number 31 NWS National Hurricane Center Miami FL AL112017 500 PM AST Wed Sep 06 2017

...EYE OF CATEGORY 5 HURRICANE IRMA MOVING AWAY FROM THE NORTHERNMOST VIRGIN ISLANDS...

...TROPICAL STORM AND HURRICANE CONDITIONS SPREADING OVER PORTIONS OF PUERTO RICO...

SUMMARY OF 500 PM AST...2100 UTC...INFORMATION

LOCATION...18.8N 65.4W

ABOUT 40 MI...60 KM NW OF ST. THOMAS

ABOUT 55 MI...85 KM ENE OF SAN JUAN PUERTO RICO

MAXIMUM SUSTAINED WINDS...185 MPH...295 KM/H

PRESENT MOVEMENT...WNW OR 285 DEGREES AT 16 MPH...26 KM/H

MINIMUM CENTRAL PRESSURE...914 MB...26.99 INCHES

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

The government of the Bahamas has issued a Hurricane Warning for the central Bahamas, including Cat Island, the Exumas, Long Island, Rum Cay, and San Salvador. A Hurricane Watch has been issued for the northwestern Bahamas, including the Abacos, Andros Island, Berry Islands, Bimini, Eleuthera, Grand Bahama Island, and New Providence.

The government of Cuba has issued a Tropical Storm Warning for the Cuban provinces of Guantanamo, Holguin, and Las Tunas.

The government of France has discontinued the Hurricane Warning for Saint Martin and Saint Barthelemy.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Hurricane Warning is in effect for...

* British Virgin Islands

- * U.S. Virgin Islands
- * Puerto Rico, Viegues, and Culebra
- * Dominican Republic from Cabo Engano to the northern border with Haiti
- * Haiti from the northern border with the Dominican Republic to Le Mole St. Nicholas
- * Southeastern Bahamas and the Turks and Caicos Islands
- * Central Bahamas

A Hurricane Watch is in effect for...

- * Cuba from Matanzas province eastward to Guantanamo province
- * Northwestern Bahamas

A Tropical Storm Warning is in effect for...

- * Dominican Republic from south of Cabo Engano westward to the southern border with Haiti
- * Haiti from south of Le Mole St. Nicholas to Port-Au-Prince
- * Cuba provinces of Guantanamo, Holguin, and Las Tunas

A Hurricane Warning means that hurricane conditions are expected somewhere within the warning area. Preparations to protect life and property should be rushed to completion.

A Hurricane Watch means that hurricane conditions are possible within the watch area. A watch is typically issued 48 hours before the anticipated first occurrence of tropical-storm-force winds, conditions that make outside preparations difficult or dangerous.

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area.

Interests elsewhere in the Dominican Republic and Haiti, as well as Cuba, the northwestern Bahamas, and Florida should monitor the progress of Irma.

For storm information specific to your area in the United States, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office. For storm information specific to your area outside the United States, please monitor products issued by your national meteorological service.

DISCUSSION AND 48-HOUR OUTLOOK

At 500 PM AST (2100 UTC), the eye of Hurricane Irma was located near latitude 18.8 North, longitude 65.4 West. Irma is moving toward the west-northwest near 16 mph (26 km/h), and this general motion is expected to continue for the next couple of days. On the forecast track, the extremely dangerous core of Irma will pass just north of Puerto Rico tonight, pass near or just north of the coast of Hispaniola Thursday, and be near the Turks and Caicos and southeastern Bahamas by Thursday evening.

Maximum sustained winds are near 185 mph (295 km/h) with higher gusts. Irma is a category 5 hurricane on the Saffir-Simpson Hurricane Wind Scale. Some fluctuations in intensity are likely during the next day or two, but Irma is forecast to remain a powerful category 4 or 5 hurricane during the next couple of days.

Hurricane-force winds extend outward up to 50 miles (85 km) from the center and tropical-storm-force winds extend outward up to 185 miles (295 km). A wind gust to 62 mph (100 km/h) has been recently reported at San Juan, Puerto Rico.

The estimated minimum central pressure based on Air Force reconnaissance aircraft data is 914 mb (26.99 inches).

HAZARDS AFFECTING LAND

STORM SURGE: The combination of a life-threatening storm surge and large breaking waves will raise water levels ABOVE NORMAL TIDE LEVELS by the following amounts within the hurricane warning area near and to the north of the center of Irma. Near the coast, the surge will be accompanied by large and destructive waves.

Turks and Caicos Islands...15 to 20 ft Southeastern and central Bahamas...15 to 20 ft Northern coast of the Dominican Republic...3 to 5 ft Northern coast of Haiti and the Gulf of Gonave...1 to 3 ft Northern coast of Cuba in the warning area...5 to 10 ft

Water levels in the Leeward Islands will gradually subside tonight.

The combination of a life-threatening storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water is expected to reach the following HEIGHTS ABOVE GROUND if the peak surge occurs at the time of high tide...

British and U.S. Virgin Islands except St. Croix...7 to 11 ft Northern coast of Puerto Rico...4 to 6 ft Southern coast of Puerto Rico and St. Croix...2 to 4 ft

The deepest water will occur along the immediate coast in areas of onshore winds, where the surge will be accompanied by large and destructive waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances. For information specific to your area, please see products issued by your local National Weather Service forecast office.

WIND: Tropical Storm and Hurricane conditions are occurring over the British and U.S. Virgin Islands and will spread westward over portions of Puerto Rico tonight. Hurricane conditions are expected to begin within the hurricane warning area in the Dominican Republic and Haiti early Thursday, with tropical storm conditions beginning tonight. Hurricane conditions are expected to begin in the warning area in the southeastern Bahamas and the Turks and Caicos Islands on Thursday with tropical storm conditions by late tonight. These conditions will spread into the Central Bahamas by Thursday night.

Hurricane and tropical storm conditions are possible within the watch area in the central Bahamas and Cuba by Friday. Tropical storm conditions are expected to begin within the warning area in Cuba Thursday night.

RAINFALL: Irma is expected to produce the following rain accumulations through Saturday:

Northern Leeward Islands...Additional 1 to 3 inches. Storm total 8 to 12 inches, isolated 20 inches.

Northeast Puerto Rico and the British and U.S. Virgin Islands...6 to 12 inches, isolated 20 inches.

Southwest Puerto Rico...3 to 6 inches, isolated 10 inches.

The Southern Leeward Islands, and Saint Croix...2 to 4 inches.

Southeast Bahamas, Central Bahamas, and the Turks and Caicos...8 to 12 inches, isolated 20 inches.

Northern Dominican Republic and northern Haiti...4 to 10 inches, isolated 15 inches.

Eastern and Central Cuba...4 to 10 inches, isolated 15 inches.

Southwest Haiti...1 to 4 inches.

In all areas this rainfall may cause life-threatening flash floods and mudslides.

SURF: Swells generated by Irma will affect the northern Leeward Islands, Puerto Rico, the Virgin Islands, the southeastern Bahamas, the Turks and Caicos Islands, the northern coast of the Dominican Republic, and portions of the southeast coast of the United States during the next several days. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

NEXT ADVISORY

Next intermediate advisory at 800 PM AST. Next complete advisory at 1100 PM AST.

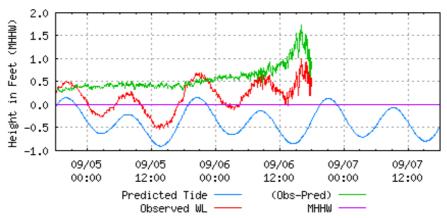
Forecaster Brown

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Culebra - Water Level, Culebra - Barometric, Isabel Segunda, Vieques Island - Water Level, Isabel Segunda, Vieques Island - Winds, Esperanza, Vieques Island - Water Level, Esperanza, Vieques Island - Winds, Esperanza, Vieques Island - Barometric, Fajardo - Water Level, Fajardo - Winds, Yabucoa Harbor - Water Level, Yabucoa Harbor - Winds, San Juan, La Puntilla, San Juan Bay - Water Level, San Juan, La Puntilla, San Juan Bay - Winds, San Juan, La Puntilla, San Juan Bay - Water Level, Arecibo - Winds, Arecibo - Barometric, Magueyes Island - Water Level, Magueyes Island - Barometric, Mayaguez - Water Level, Mayaguez - Barometric, Mona Island - Water Level, Mona Island - Barometric, Lime Tree Bay. St. Croix - Water Level, Lime Tree Bay. St. Croix - Barometric, Christiansted Harbor, St Croix - Water Level, Christiansted Harbor, St Croix - Winds, Christiansted Harbor, St Croix - Barometric

NOAA/NOS/CO-OPS 9752235 Culebra, PR

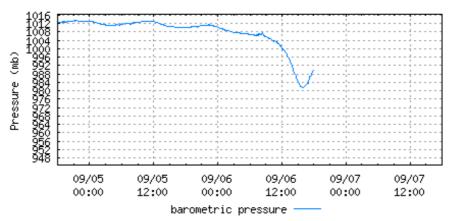
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 17:54 (AST). Data relative to MHHW Observed: 0.57 ft. Predicted: -0.36 ft. Residual: 0.93 ft. Historical Maximum Water Level: Nov 6 2006, 0.84 ft. Next High Tide: 09/06/2017 21:06 (AST), 0.13 ft.

NOAA/NOS/CO-OPS 9752235 Culebra, PR

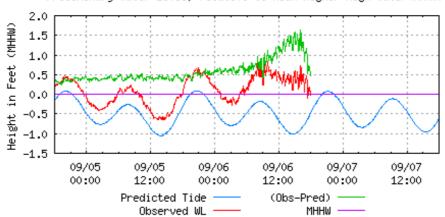
Barometric Pressure



Last Observed Sample: 09/06/2017 17:54 (AST)
Barometric Pressure: 990.0 mb

NOAA/NOS/CO-OPS 9752619 Isabel Segunda, Viegues Island, PR

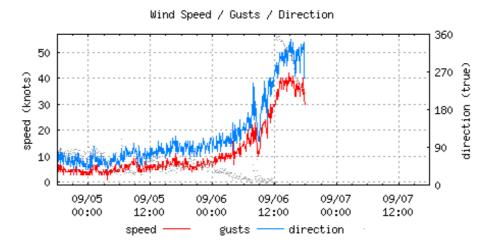
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 18:00 (AST). Data relative to MHHW Observed: 0.31 ft. Predicted: -0.48 ft. Residual: 0.79 ft.

Historical Maximum Water Level: n/a Next High Tide: 09/06/2017 21:11 (AST), 0.07 ft.

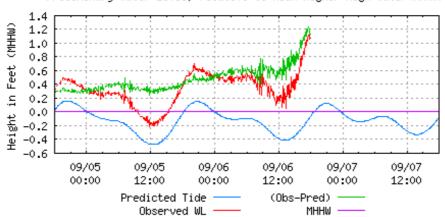
NOAA/NOS/CO-OPS 9752619 Isabel Segunda, Vieques Island, PR



Last Observed Sample: 09/06/2017 18:00 (AST) Wind Speed: 33 knots Gusts: 49 knots Direction: 222° T

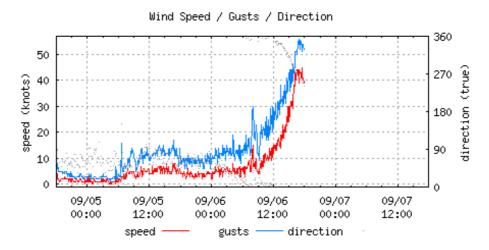
NOAA/NOS/CO-OPS 9752695 Esperanza, Viegues Island, PR

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 18:00 (AST). Data relative to MHHW Observed: 1.10 ft. Predicted: -0.06 ft. Residual: 1.16 ft. Historical Maximum Water Level: Aug 22 2011, 0.99 ft. Next High Tide: 09/06/2017 20:54 (AST), 0.12 ft.

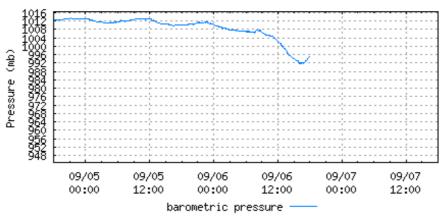
NOAA/NOS/CO-OPS 9752695 Esperanza, Viegues Island, PR



Last Observed Sample: 09/06/2017 18:00 (AST) Wind Speed: 39 knots Gusts: 48 knots Direction: 241° T

NOAA/NOS/CO-OPS 9752695 Esperanza, Vieques Island, PR

Barometric Pressure



Last Observed Sample: 09/06/2017 18:00 (AST)
Barometric Pressure: 995.4 mb

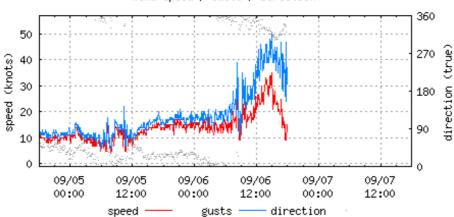
NOAA/NOS/CO-OPS 9753216 Fajardo, PR

Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.5 Height in Feet (MHHW) 1.0 0.5 0.0 -0.5-1.0 -1.509/05 09/05 09/06 09/06 09/07 09/07 00:00 12:00 12:00 12:00 00:00 00:00 Predicted Tide (Obs-Pred) Observed WL MHHW

Last Observed Sample: 09/06/2017 18:00 (AST). Data relative to MHHW Observed: 0.21 ft. Predicted: -0.57 ft. Residual: 0.78 ft. Historical Maximum Water Level: Aug 30 2010, 0.84 ft. Next High Tide: 09/06/2017 21:02 (AST), 0.07 ft.

NOAA/NOS/CO-OPS 9753216 Fajardo, PR

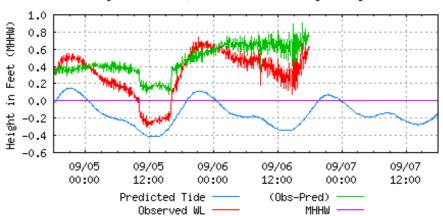
Wind Speed / Gusts / Direction



Last Observed Sample: 09/06/2017 18:00 (AST) Wind Speed: 13 knots Gusts: 34 knots Direction: 190° T

NOAA/NOS/CO-OPS 9754228 Yabucoa Harbor, PR

Preliminary Water Level, relative to Mean Higher High Water(MHHW)

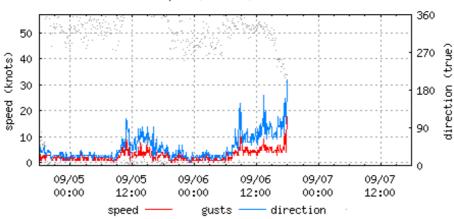


Last Observed Sample: 09/06/2017 18:00 (AST). Data relative to MHHW Observed: 0.50 ft. Predicted: -0.13 ft. Residual: 0.63 ft.

Historical Maximum Water Level: n/a Next High Tide: 09/06/2017 21:24 (AST), 0.07 ft.

NOAA/NOS/CO-OPS 9754228 Yabucoa Harbor, PR

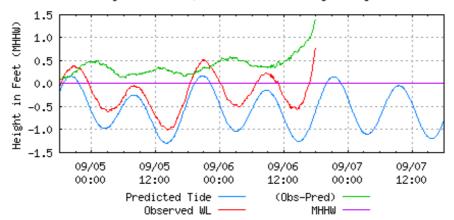
Wind Speed / Gusts / Direction



Last Observed Sample: 09/06/2017 18:00 (AST) Wind Speed: 16 knots Gusts: 28 knots Direction: 209° T

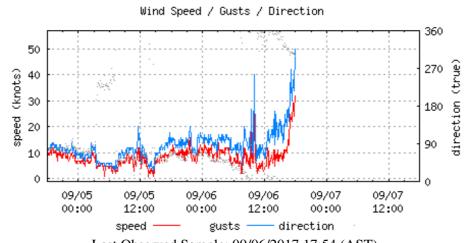
NOAA/NOS/CO-OPS 9755371 San Juan, La Puntilla, San Juan Bay, PR

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 17:54 (AST). Data relative to MHHW Observed: 0.77 ft. Predicted: -0.62 ft. Residual: 1.39 ft. Historical Maximum Water Level: Sep 18 1989, 2.77 ft. Next High Tide: 09/06/2017 21:22 (AST), 0.15 ft.

NOAA/NOS/CO-OPS 9755371 San Juan, La Puntilla, San Juan Bay, PR



Last Observed Sample: 09/06/2017 17:54 (AST) Wind Speed: 32 knots Gusts: 50 knots Direction: 300° T

NOAA/NOS/CO-OPS 9755371 San Juan, La Puntilla, San Juan Bay, PR

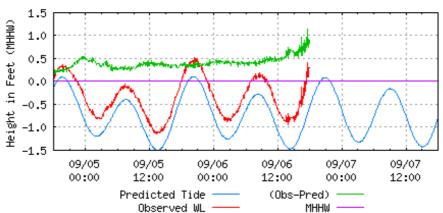
Barometric Pressure

Last Observed Sample: 09/06/2017 17:54 (AST)
Barometric Pressure: 992.2 mb

barometric pressure

NOAA/NOS/CO-OPS 9757809 Arecibo, PR

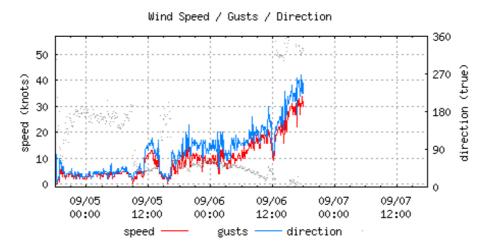
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 18:00 (AST). Data relative to MHHW Observed: 0.29 ft. Predicted: -0.55 ft. Residual: 0.84 ft. Historical Maximum Water Level: Oct 8 2010, 0.90 ft.

Next High Tide: 09/06/2017 20:51 (AST), 0.08 ft.

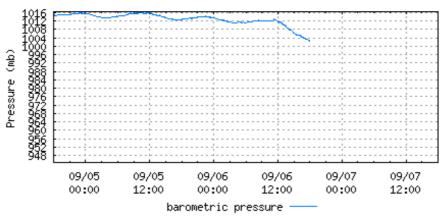
NOAA/NOS/CO-OPS 9757809 Arecibo, PR



Last Observed Sample: 09/06/2017 18:00 (AST) Wind Speed: 30 knots Gusts: 35 knots Direction: 326° T

NOAA/NOS/CO-OPS 9757809 Arecibo, PR

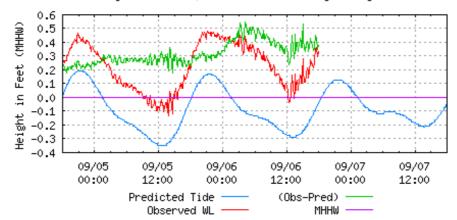
Barometric Pressure



Last Observed Sample: 09/06/2017 18:00 (AST)
Barometric Pressure: 1002.5 mb

NOAA/NOS/CO-OPS 9759110 Magueyes Island, PR

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 17:54 (AST). Data relative to MHHW Observed: 0.33 ft. Predicted: -0.05 ft. Residual: 0.38 ft. Historical Maximum Water Level: Sep 22 1998, 1.60 ft. Next High Tide: 09/06/2017 21:35 (AST), 0.13 ft.

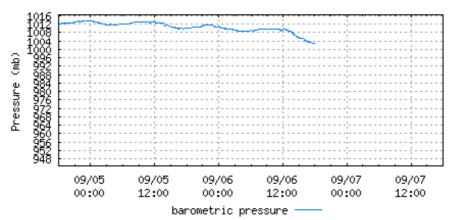
NOAA/NOS/CO-OPS 9759110 Magueyes Island, PR

Wind Speed / Gusts / Direction 360 50 270 direction (true) speed (knots) 40 30 180 20 90 10 09/07 09/07 09/05 09/06 00:00 12:00 00:00 12:00 00:00 12:00 speed gusts - direction

Last Observed Sample: 09/06/2017 17:54 (AST) Wind Speed: 10 knots Gusts: 15 knots Direction: 337° T

NOAA/NOS/CO-OPS 9759110 Magueyes Island, PR

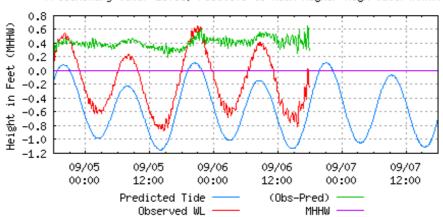
Barometric Pressure



Last Observed Sample: 09/06/2017 17:54 (AST)
Barometric Pressure: 1003.0 mb

NOAA/NOS/CO-OPS 9759394 Mayaguez, PR

Preliminary Water Level, relative to Mean Higher High Water(MHHW)

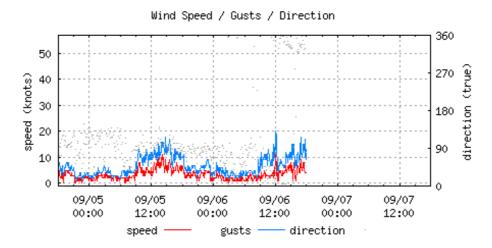


Last Observed Sample: 09/06/2017 17:54 (AST). Data relative to MHHW Observed: -0.23 ft. Predicted: -0.53 ft. Residual: 0.30 ft.

Historical Maximum Water Level: Oct 1 2015, 0.00 ft.

Historical Maximum Water Level: Oct 1 2015, 0.99 ft. Next High Tide: 09/06/2017 21:02 (AST), 0.12 ft.

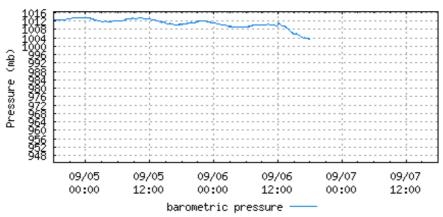
NOAA/NOS/CO-OPS 9759394 Mayaguez, PR



Last Observed Sample: 09/06/2017 17:54 (AST) Wind Speed: 4 knots Gusts: 9 knots Direction: 81° T

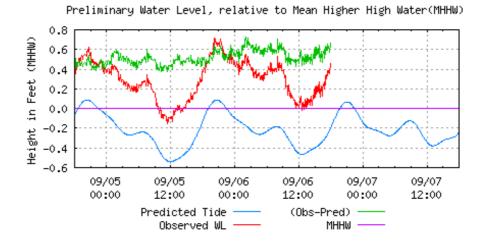
NOAA/NOS/CO-OPS 9759394 Mayaguez, PR

Barometric Pressure



Last Observed Sample: 09/06/2017 17:54 (AST)
Barometric Pressure: 1003.5 mb

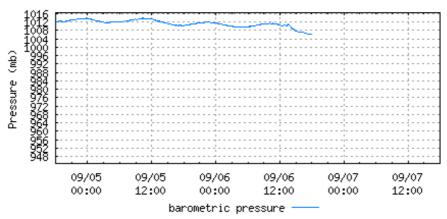
NOAA/NOS/CO-OPS 9759938 Mona Island, PR



Last Observed Sample: 09/06/2017 18:00 (AST). Data relative to MHHW Observed: 0.44 ft. Predicted: -0.19 ft. Residual: 0.63 ft. Historical Maximum Water Level: Dec 23 2010, 1.24 ft. Next High Tide: 09/06/2017 21:02 (AST), 0.07 ft.

NOAA/NOS/CO-OPS 9759938 Mona Island, PR

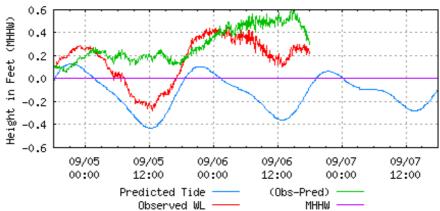
Barometric Pressure



Last Observed Sample: 09/06/2017 18:00 (AST)
Barometric Pressure: 1006.3 mb

NOAA/NOS/CO-OPS 9751401 Lime Tree Bay. St. Croix, VI

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 17:54 (AST). Data relative to MHHW Observed: 0.22 ft. Predicted: -0.08 ft. Residual: 0.30 ft. Historical Maximum Water Level: Nov 17 1999, 1.88 ft. Next High Tide: 09/06/2017 21:27 (AST), 0.07 ft.

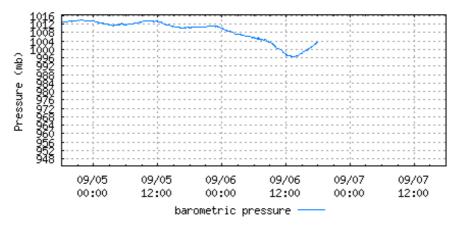
NOAA/NOS/CO-OPS 9751401 Lime Tree Bay. St. Croix, VI

Wind Speed / Gusts / Direction 360 50 270 direction (true) speed (knots) 40 30 180 20 90 10 0 09/07 09/06 09/06 09/07 00:00 12:00 00:00 12:00 00:00 12:00 speed gusts - direction

Last Observed Sample: 09/06/2017 17:54 (AST) Wind Speed: 28 knots Gusts: 34 knots Direction: 229° T

NOAA/NOS/CO-OPS 9751401 Lime Tree Bay. St. Croix, VI

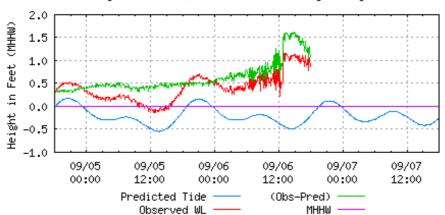
Barometric Pressure



Last Observed Sample: 09/06/2017 17:54 (AST)
Barometric Pressure: 1003.3 mb

NOAA/NOS/CO-OPS 9751381 Lameshur Bay, St John, VI

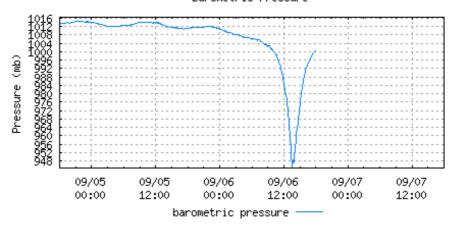
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 18:00 (AST). Data relative to MHHW Observed: 0.94 ft. Predicted: -0.20 ft. Residual: 1.14 ft. Historical Maximum Water Level: Aug 30 2010, 0.89 ft. Next High Tide: 09/06/2017 21:26 (AST), 0.12 ft.

NOAA/NOS/CO-OPS 9751381 Lameshur Bay, St John, VI

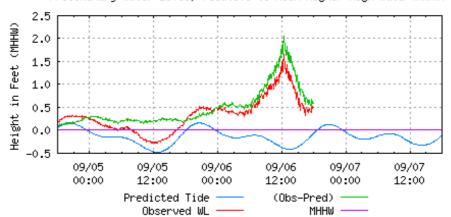
Barometric Pressure



Last Observed Sample: 09/06/2017 18:00 (AST)
Barometric Pressure: 1000.6 mb

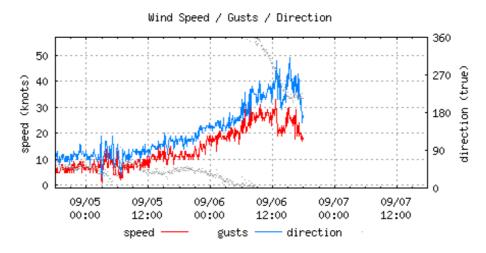
NOAA/NOS/CO-OPS 9751364 Christiansted Harbor, St Croix, VI

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/06/2017 17:54 (AST). Data relative to MHHW Observed: 0.51 ft. Predicted: -0.07 ft. Residual: 0.58 ft. Historical Maximum Water Level: Oct 16 2008, 1.17 ft. Next High Tide: 09/06/2017 20:53 (AST), 0.13 ft.

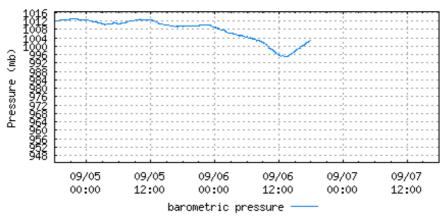
NOAA/NOS/CO-OPS 9751364 Christiansted Harbor, St Croix, VI



Last Observed Sample: 09/06/2017 17:54 (AST) Wind Speed: 18 knots Gusts: 26 knots Direction: 214° T

NOAA/NOS/CO-OPS 9751364 Christiansted Harbor, St Croix, VI

Barometric Pressure



Last Observed Sample: 09/06/2017 17:54 (AST)

Barometric Pressure: 1002.7 mb

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
9752235	Culebra, PR	09/06/2017 17:54 (AST)	0.57 ft	-0.36 ft	0.93 ft	1.00 ft
9752619	Isabel Segunda, Vieques Island, PR	09/06/2017 18:00 (AST)	0.31 ft	-0.48 ft	0.79 ft	0.83 ft
9752695	Esperanza, Vieques Island, PR	09/06/2017 18:00 (AST)	1.10 ft	-0.06 ft	1.16 ft	1.12 ft
9753216	Fajardo, PR	09/06/2017 18:00 (AST)	0.21 ft	-0.57 ft	0.78 ft	0.96 ft
9754228	Yabucoa Harbor, PR	09/06/2017 18:00 (AST)	0.50 ft	-0.13 ft	0.63 ft	0.74 ft
9755371	San Juan, La Puntilla, San Juan Bay, PR	09/06/2017 17:54 (AST)	0.77 ft	-0.62 ft	1.39 ft	0.77 ft
9757809	Arecibo, PR	09/06/2017 18:00 (AST)	0.29 ft	-0.55 ft	0.84 ft	0.53 ft
9759110	Magueyes Island, PR	09/06/2017 17:54 (AST)	0.33 ft	-0.05 ft	0.38 ft	0.48 ft
9759394	Mayaguez, PR	09/06/2017 17:54 (AST)	-0.23 ft	-0.53 ft	0.30 ft	0.66 ft
9759938	Mona Island, PR	09/06/2017 18:00 (AST)	0.44 ft	-0.19 ft	0.63 ft	0.72 ft
9751401	Lime Tree Bay. St. Croix, VI	09/06/2017 17:54 (AST)	0.22 ft	-0.08 ft	0.30 ft	0.46 ft
9751381	Lameshur Bay, St John, VI	09/06/2017 18:00 (AST)	0.94 ft	-0.20 ft	1.14 ft	1.15 ft
9751364	Christiansted Harbor, St Croix, VI	09/06/2017 17:54 (AST)	0.51 ft	-0.07 ft	0.58 ft	1.66 ft

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